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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|--|-------------|-----------------------|----------------------|------------------|
| 09/432,917   | 11/02/1999  | SAMUEL KEITH McDOWELL | 262-23-219           | 1776             |
| 7590   | 10/27/2004  |                       | EXAMINER             |                  |
| KOPPEL & JACOBC<br>555 ST CHARLES DRIVE SUITE 107<br>THOUSAND OAKS, CA 91360 |             |                       | OPSASNICK, MICHAEL N |                  |
|  |             |                       | ART UNIT             | PAPER NUMBER     |
|  |             |                       | 2655                 | 6                |
| DATE MAILED: 10/27/2004  |             |                       |                      |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>    |  |
|------------------------------|------------------------|------------------------|--|
|                              | 09/432,917             | MCDOWELL, SAMUEL KEITH |  |
| Examiner                     | Art Unit               |                        |  |
| Michael N. Opsasnick         | 2655                   |                        |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 02 November 1999.

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1-27 and 29-44 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) 1-27 and 29-39 is/are allowed.  
6)  Claim(s) 40-42 and 44 is/are rejected.  
7)  Claim(s) 43 is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 1-25,27,29-39 are allowable over the prior art of record.

As per the independent claims, the claim language relating to the input of positional coordinates of audio elements based on users input, in addition to other audio elements, is not explicitly taught by the prior art of record.

2. Claim 43 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 40-42,44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Everett (US Patent No. 5,864,816) in view of ISO/IEC 11172-3 (Information Technology – Coding of

moving pictures and associated audio for digital storage media at up to about 1,5 Mbits/s – Part 3: Audio, page 20-79, first edition 1993-08-01).

As per claim 40, Everett discloses a multi-channel interactive audio system (col. 4, ln. 39-40), comprising:

A memory for storing a plurality of audio components as sequences of input data frames, each input data frame including subband data and their scale factors that have been compressed and packed (as buffer22 of figure 2, containing frames of data with subband rows with scale factors – col. 4 lines 36-54));

An audio renderer that

Unpacks and decompresses the audio components' subband data and scale factors for each channel (col. 6, ln. 28-37);

Calculates scale factors for the mixed subband data (as calculating scale factors to be applied on decompression -- col. 2 lines 13-15),

Mixes the audio component's subband data in the subband domain for each channel (col. 4, ln. 45-54);

unpacking and decompressing on the subband (col. 3, ln. 54 to col. 4, ln. 67, more specifically col. 4 lines 60-64).

Everett fails to teach further compression of the mixed subband data and their scale factors for each channel, packing and multiplexing the channels' compressed subband data and scale factors into an output frame, and placing the output frame into a queue for transmission to a decoder. However, ISO/IEC 11172-3 teaches that an audio compression process wherein the

mixed subband data and their scale factors for each channel (Coding of samples and bit-allocation sections on page 79), packs and multiplexes the channels' compressed subband data and scale factors into an output frame (Formatting and transmission section on page 79), and places the output frame into a queue for transmission to a decoder (Formatting and transmission section on page 79).

Therefore, it would have been obvious to one of ordinary skill in the art of MPEG coding systems to modify the teachings of Everett (US Patent No. 5,864,816) with the multiplexed output compression techniques of ISO/IEC 11172-3 because one of ordinary skill in the art would readily realize that data compression at a centralized decoder before transmission to several remote systems in a limited bandwidth environment, would increase the transmission rate without compromising the quality of the signal (ISO/IEC 11172-3, page 74, first 11 lines)

As per claim 41, Everett further discloses that the audio renderer mixes only the subband data that is considered audible to the user (col. 3, ln. 54-57; col. 4, ln. 57-64).

As per claim 42, Everett further discloses that the input data frame further includes a header and a bit allocation table that are fixed from frame-to-frame (figure 1) so that only the scale factors and subband data vary (col. 4, ln. 10-17).

As per claim 44, Everett further discloses that one or more of the audio components comprise looped data having commencing input frames and closing input frames whose subband

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data has been preprocessed to ensure seamless concatenation with the commencing frame (col. 6, ln. 6-11).

***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. The only standing rejections are based on the newly submitted claims, claims 40-42, and claim 44.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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**7. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

(703) 872 9314,

(for informal or draft communications, please label "PROPOSED" or  
"DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal  
Drive, Arlington, VA., Sixth Floor (Receptionist).

**8. Any inquiry concerning this communication or earlier communications from the  
examiner should be directed to Michael Opsasnick, telephone number (703)305-4089,  
who is available Tuesday-Thursday, 9am-4pm.**

If attempts to reach the examiner by telephone are unsuccessful, the examiner's  
supervisor, Ms. Doris To, can be reached at (703)305-4827. The facsimile phone number  
for this group is (703)872-9306.

Any inquiry of a general nature or relating to the status of this application or  
proceeding should be directed to the Group 2600 receptionist whose telephone number is  
(703) 305-4750, the 2600 Customer Service telephone number is (703) 306-0377.

Information regarding the status of an application may be obtained from the  
Patent Application Information Retrieval (PAIR) system. Status information for  
published applications may be obtained from either Private PAIR or Public PAIR. Status  
information for unpublished applications is available through Private PAIR only. For  
more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you  
have questions on access to the Private PAIR system, contact the Electronic Business  
Center (EBC) at 866-217-9197 (toll-free).

mno  
10/25/2004



SUSAN MCFADDEN  
PRIMARY EXAMINER